

Appln No. 09/747,677
Amdt date May 1, 2006
Reply to Office action of January 30, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-89. (Canceled)

90. (Previously Presented) A hyperlinked video broadcast system including a plurality of multiplexed program streams, said system comprising:

a mask generator generating a mask including graphics data for overlaying a graphics image on a video frame, the graphics image being associated with a video object;

an annotation source providing object data associated with the video object, the object data including an indicia indicative that the video object is linked to one of the plurality of multiplexed program streams, and an identifier for a particular one of the plurality of multiplexed program streams; and

an encoder encoding the mask and the object data into a television broadcast signal; and

a transmitter transmitting the television broadcast signal and the plurality of multiplexed program streams to a receiver, wherein the receiver is capable of retrieving and overlaying the graphics image on the video frame, receiving viewer actuation of the overlaid graphics image, and in response to the viewer actuation, reviewing the indicia in the object data for determining whether the associated video object is linked to one of the plurality of multiplexed program streams, and in response to a determination that the video object is linked to one of the plurality of multiplexed program streams, retrieving from the object data the identifier of the particular one of the plurality of multiplexed program streams, and switching from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams.

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91. (Previously Presented) The broadcast system of claim 90, wherein the presented program stream is a video stream.

92. (Previously Presented) The broadcast system of claim 90, wherein the presented program stream is an audio stream.

93. (Previously Presented) The broadcast system of claim 90, wherein the graphics image is overlaid on the video object.

94. (Previously Presented) The broadcast system of claim 90, wherein the receiver is further capable of determining whether the video object is visible in the video frame and, responsive to a determination that the video object is visible in the video frame, overlaying the graphics image on the video frame.

95. (Previously Presented) The broadcast system of claim 90, wherein the television broadcast signal is a digital signal.

96. (Previously Presented) The broadcast system of claim 90, wherein the television broadcast signal is an analog signal.

97. (Previously Presented) The broadcast system of claim 90, wherein the program streams are transmitted in an MPEG transport stream.

98. (Previously Presented) A hyperlinked video reception system including a plurality of received multiplexed program streams, said system comprising:

a tuner receiving a television broadcast signal including mask data and object data, the mask data including graphics data for overlaying a graphics image on a video frame, the graphics image being associated with a video object, the object data including an indicia indicative that

the video object is linked to one of the plurality of multiplexed program streams, and an identifier for a particular one of the plurality of multiplexed program streams;

a decoder coupled to the tuner, the decoder decoding the mask data and the object data;
and

a processor coupled to the decoder, the processor retrieving and overlaying the graphics image on the video frame, receiving viewer actuation of the overlaid graphics image, and in response to the viewer actuation, reviewing the indicia in the object data for determining whether the associated video object is linked to one of the plurality of multiplexed program streams, and in response to a determination that the video object is linked to one of the plurality of multiplexed program streams, retrieving from the object data the identifier of the particular one of the plurality of multiplexed program streams, and switching from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams.

99. (Previously Presented) The reception system of claim 98, wherein the presented program stream is a video stream.

100. (Previously Presented) The reception system of claim 98, wherein the presented program stream is an audio stream.

101. (Previously Presented) The reception system of claim 98, wherein the graphics image is overlaid on the video object.

102. (Previously Presented) The reception system of claim 98, wherein the processor further determines whether the video object is visible in the video frame and, responsive to a determination that the video object is visible in the video frame, overlaying the graphics image on the video frame.

103. (Previously Presented) The reception system of claim 98, wherein the television broadcast signal is a digital signal.

104. (Previously Presented) The reception system of claim 98, wherein the television broadcast signal is an analog signal.

105. (Previously Presented) The reception system of claim 98, wherein the program streams are transmitted in an MPEG transport stream.

106. (Previously Presented) A method for switching between multiplexed program streams in a hyperlinked video broadcast system, the method comprising:

generating a mask including graphics data for overlaying a graphics image on a video frame, the graphics image being associated with a video object;

providing object data associated with the video object, the object data including an indicia indicative that the video object is linked to one of the plurality of multiplexed program streams, and an identifier for a particular one of the plurality of multiplexed program streams;

encoding the mask and the object data into a television broadcast signal; and

transmitting the television broadcast signal and the plurality of multiplexed program streams to a receiver, wherein the receiver is capable of retrieving and overlaying the graphics image on the video frame, receiving viewer actuation of the overlaid graphics image, and in response to the viewer actuation, reviewing the indicia in the object data for determining whether the associated video object is linked to one of the plurality of multiplexed program streams, and in response to a determination that the video object is linked to one of the plurality of multiplexed program streams, retrieving from the object data the identifier of the particular one of the plurality of multiplexed program streams, and switching from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams.

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107. (Previously Presented) The method of claim 106, wherein the presented program stream is a video stream.

108. (Previously Presented) The method of claim 106, wherein the presented program stream is an audio stream.

109. (Previously Presented) The method of claim 106, wherein the graphics image is overlaid on the video object.

110. (Previously Presented) The method of claim 106, wherein the receiver is further capable of determining whether the video object is visible in the video frame and, responsive to a determination that the video object is visible in the video frame, overlaying the graphics image on the video frame.

111. (Previously Presented) The method of claim 106, wherein the television broadcast signal is a digital signal.

112. (Previously Presented) The method of claim 106, wherein the television broadcast signal is an analog signal.

113. (Previously Presented) The method of claim 106, wherein the program streams are transmitted in an MPEG transport stream.

114. (Currently Amended) A method for switching between multiplexed program streams in a hyperlinked video ~~broadcast~~ reception system including a tuner, decoder, and processor, the method comprising:

receiving under control of the tuner a television broadcast signal including mask data and object data, the mask data including graphics data for overlaying a graphics image on a video

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frame, the graphics image being associated with a video object, the object data including an indicia indicative that the video object is linked to one of the plurality of multiplexed program streams, and an identifier for a particular one of the plurality of multiplexed program streams;

decoding under control of the decoder the mask data and the object data;

overlaying under control of the processor the graphics image on the video frame;

receiving under control of the processor viewer actuation of the overlaid graphics image;

responsive to the viewer actuation of the overlaid graphics image, reviewing under control of the processor the indicia in the object data for determining whether the associated video object is linked to one of the plurality of multiplexed program streams;

responsive to a determination that the video object is linked to one of the plurality of multiplexed program streams, retrieving under control of the processor from the object data, the identifier of the particular one of the plurality of multiplexed program streams; and

switching under control of the processor from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams.

115. (Previously Presented) The method of claim 114, wherein the presented program stream is a video stream.

116. (Previously Presented) The method of claim 114, wherein the presented program stream is an audio stream.

117. (Previously Presented) The method of claim 114, wherein the graphics image is overlaid on the video object.

118. (Previously Presented) The method of claim 114, wherein the overlaying of the graphics image on the video frame includes:

determining whether the video object is visible in the video frame; and

responsive to a determination that the video object is visible in the video frame, overlaying the graphics image on the video frame.

119. (Previously Presented) The method of claim 114, wherein the television broadcast signal is a digital signal.

120. (Previously Presented) The method of claim 114, wherein the television broadcast signal is an analog signal.

121. (Previously Presented) The method of claim 114, wherein the program streams are transmitted in an MPEG transport stream.

122. (New) The broadcast system of claim 90, wherein the particular one of the plurality of multiplexed program streams displayed upon the user actuation of the overlaid graphics image is the same for each user receiving the plurality of multiplexed program streams and actuating the overlaid graphics image.

123. (New) The broadcast system of claim 90, wherein the indicia is a link type indicating a video link, the identifier identifies a program mapping table, and the receiver extracts from the program mapping table identifiers of video and audio streams associated with the particular one of the plurality of multiplexed program streams.